PRIAPISM

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PRIAPISM

Prolonged erection 4-6hours

PRIAPISM >6 hours

Sustained , painful , aimless , erection may or may not related to sexual excitation .

* Both corpora cavernosa are rigid.
* corpus spongiosum is spared so no urinary symptoms, except retention due to penile pain .

Classification

May be:

- primary/idiopathic or
- secondary

Can also be classified:

- Low-flow (ischemic / anoxic)
- High-flow (non ischemic / arteriogenic)
- Recurrent/stuttering

Epidemiology

- Can occur in all age-groups
- Peak incidence:
  - -(5-10ys) Recurrent/stuttering associated with sickle-cell or neoplasm
  - -(20-50ys) idiopathic or due to ICI

I.C.I & PRIAPISM

(1) Good evaluation of pt. & careful dose calculation i,e. small test dose must be given for :

1- Pt. come for 1st, visit

2- Neurogenic ED.

3- Psychogenic ED.

(2) If you want to do it, you must know how to deal with its complications.

Aetiology

1) Idiopathic

2) Secondary

- Iatrogenic (ICI)
- Drugs
  - Alpha-blockers
  - Antidepressants (trazadone &other SSRIs)
  - Anticoagulants (heparin)
  - Recreational drugs

- Thrombo-embolic

  sickle-cell, thallasaemia, leukaemia, fat emboli

- Neurological
  SC. lesions, cauda equine, anesthesia, autonomic neuropathy/diabetes.
- Neoplastic
  malignant infiltration from eg. Bladder.
- Trauma
  perineal/genital causing damage to cavernosal artery or AV fistula (high-flow)
- Infectious/toxic
  malaria, rabies.

Pathophysiology

Low-flow priapism

- Failure of the detumescence mechanism, leading to increase of intracavernous pressure & ischemia .

•4-8 hours erection becomes painful and there is irreversible smooth muscle dysfunction

•12 hours - interstitial edema and damage to the sinusoidal endothelium

•48 hours sinusoidal thrombi, fibrotic or necrotic smooth muscle cells after that replaced by fibrosis

High-flow priapism

- All priapism begins as high-flow .
- High arterial flow continues with adequate venous outflow and well-oxygenated corpora cavernosum
- Most commonly occurs after blunt perineal/genital trauma causing damage to cavernosal artery or A-V fistula , and occurs in young men

Recurrent/stuttering priapism

often occurs in patients with sickle-cell and in those who have had previous episodes of priapism .

Clinical features

Low-flow

*Can occur during sleep
*Pain is mild then severe
*Penis is rigid
*Cavernous blood - black (ischaemic),
*PO_2 <30mmHg,
*PCO_2 >80mmHg,
*pH <7.25
*Colour Doppler shows no flow
*Vessels intact on arteriography

High-flow

*Occurs following trauma
*Pain is mild to moderate
*Penis is turgid (venous channels are open)
*Cavernous blood – red (non-ischaemic),
*PO_2 >50mmHg,
*PCO_2 >50mmHg,
*pH >7.5
*Colour Doppler shows flow or fistula
*Arteriography may show A-V malformation

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Management

- History and examination
- Analgesia
- Urinalysis and culture (exclude UTI)
- Haematology (exclude Sickle-cell or leukaemia)
- Treat underlying cause if present eg rehydration, oxygenation and possibly exhange transfusion in sickle cell patients
- Cavernous blood gas measurement
- Colour Doppler if doubt exists.

HOW TO DEAL WITH Low-flow PRIAPISM

* You must start ttt. as early as possible because tissue ischemia begins after 4-6 hs .

*Inject mild sedative & pain killer before you start ttt.

*Encourage ejaculation . If not:

*Ice packs compresses.

*Under complete aseptic condition ,Aspiration of blood from the corpora cavernosa by 19-gauge scalp needle 20ml by 20ml untile detumesence occurred or for 6 times .

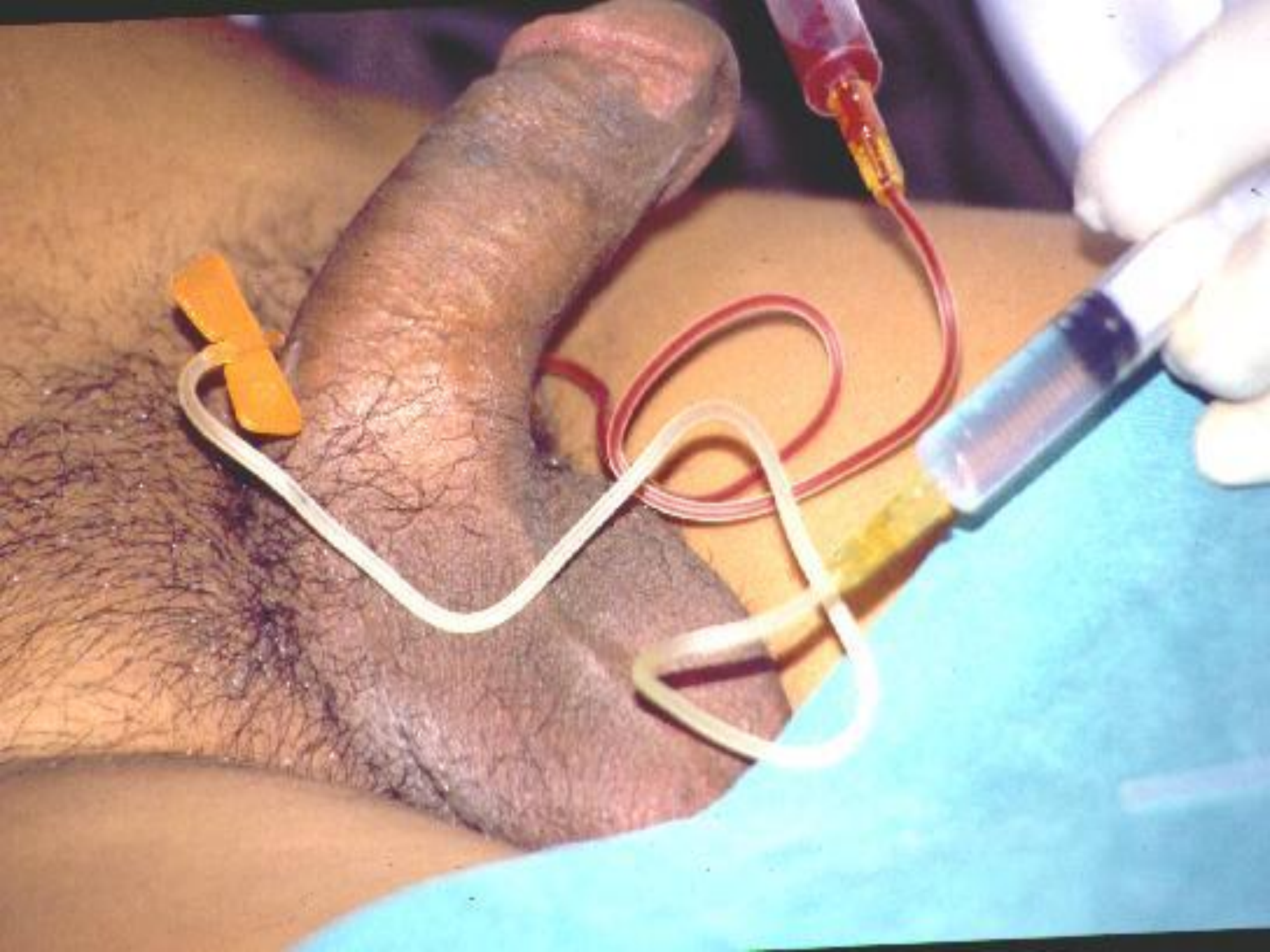
(cont.)

*If refilling or no response to aspiration alone we can aspirate from one corpora & irrigate saline containing V.C. drugs e.g. ephedrine or diluted adrenaline in the other corpora.

(please monitor bl. pressure & heart rate)

* If detumesence, tight compression & observation for 1 h.

* If no response shift to the surgical procedures.



Shunt Operations

- **Winter technique**

  -Penile block, trucut needle inserted through glans into corpora cavernosa. repeated 4 times and corpora squeezed to evacuate hypoxic bl.

  -Preserves potency in most patients

- **Corporo-spongiosal shunt**

  Successful ttt. but 50% of patients remain ED

- **Corporo-saphenous shunt** –

  LSV mobilsed, divided in mid-thigh, tunnelled subcutaneously and anastomosed to tunica albuginea on ipsilateral corpus

COMPLICATION OF TTT

(A) Early :

(1) Acute hypertension , headache , palpitation , cardiac arrythmia from adrenegic agents

(2) Bleeding , haematoma of the shaft & infection after aspiration & irrigation

(3) Uretheral injury from needle punture or shunt operation.

(B) Late :

Fibrosis & impotence

Recurrent/stuttering priapism

It is a management problem.

Treatment is aimed at:

- Preventing prolonged erections eg :
  with hormonal manipulation such as LHRH anlogues/antiandrogens or possibly digoxin

- Treating when arise eg: terbutaline

HIGH FLOW PRIAPISM TTT

1- Conservative ttt

- Mechanical compression of the perineum
- Ice packs
- Aspiration &Irrigation with saline& Alpha-agonists
- Just to observe the patient as potency can be preserved for many years and is painless
- If failed

High flow priapism ttt

2- Non conservative ttt.

- Selective embolisation of central penile artery

- Surgical ligation of ipsilateral internal pudendal artery,common penile artery or microvascular ligation of the fistula between the artery and sinusoidal spaces

- Methylene blue may be of use to inhibite guanylate cyclase and decrease NO , but this effect is short-lived

PROGNOSIS OF TTT

The incidence of impotence is directly related to the duration of priapism & the aggressiveness of ttt.

- The ED rate in literature reported to be 50% in low flow priapism ,
- Almost all patients will regain potency if the priapism is aborted within 12-24hs.